

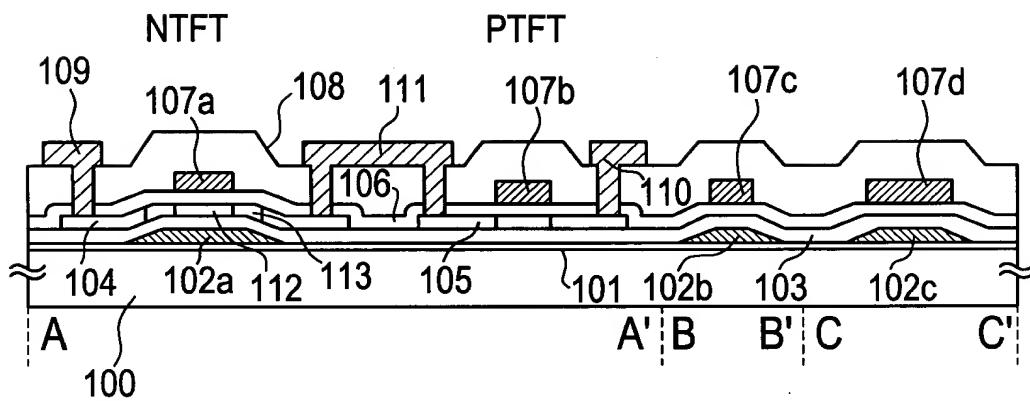
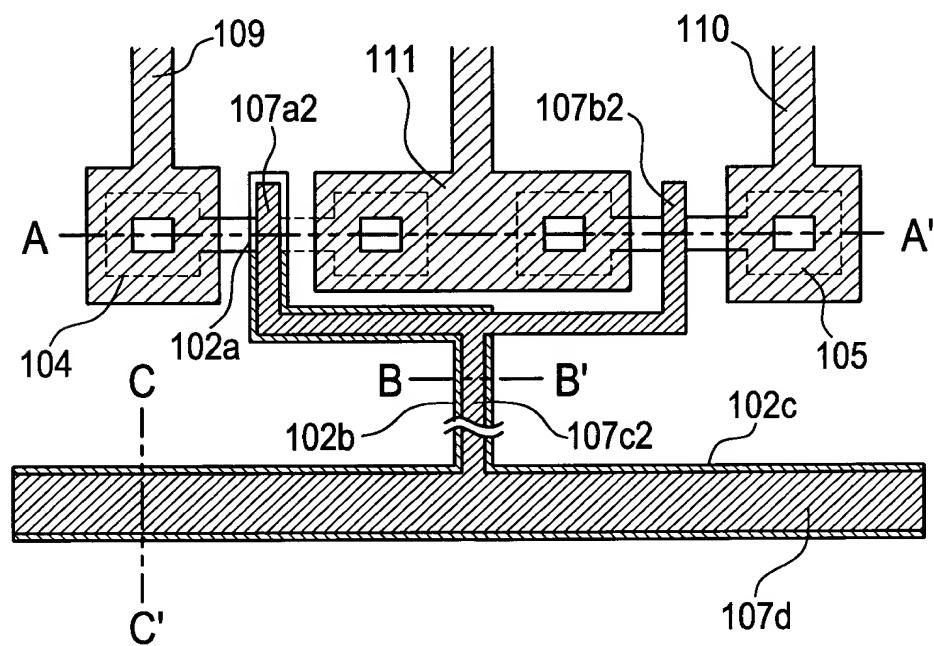
FIG. 1A**FIG. 1B**

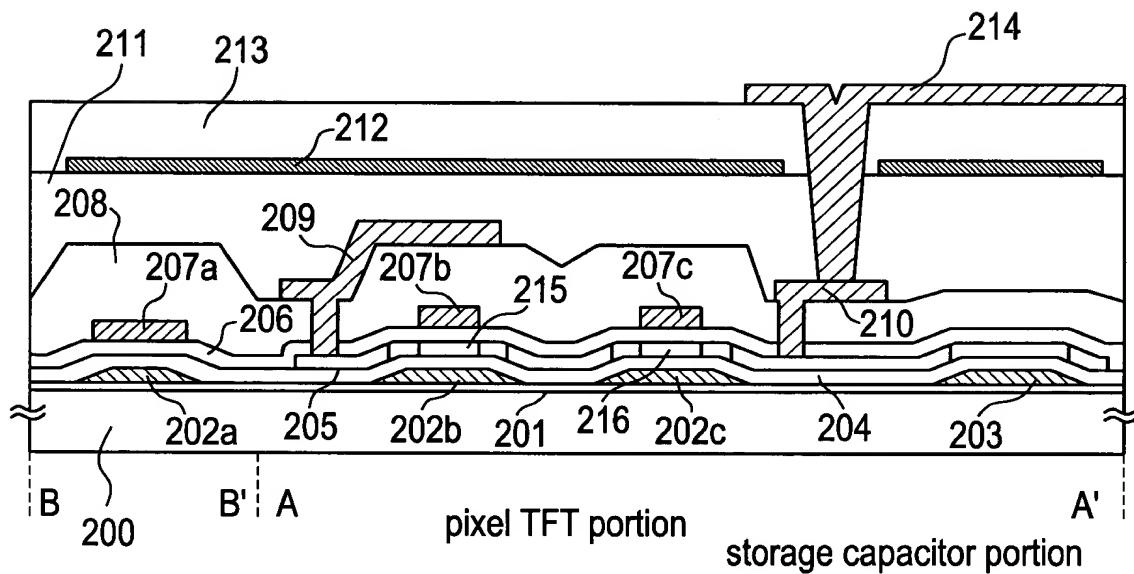
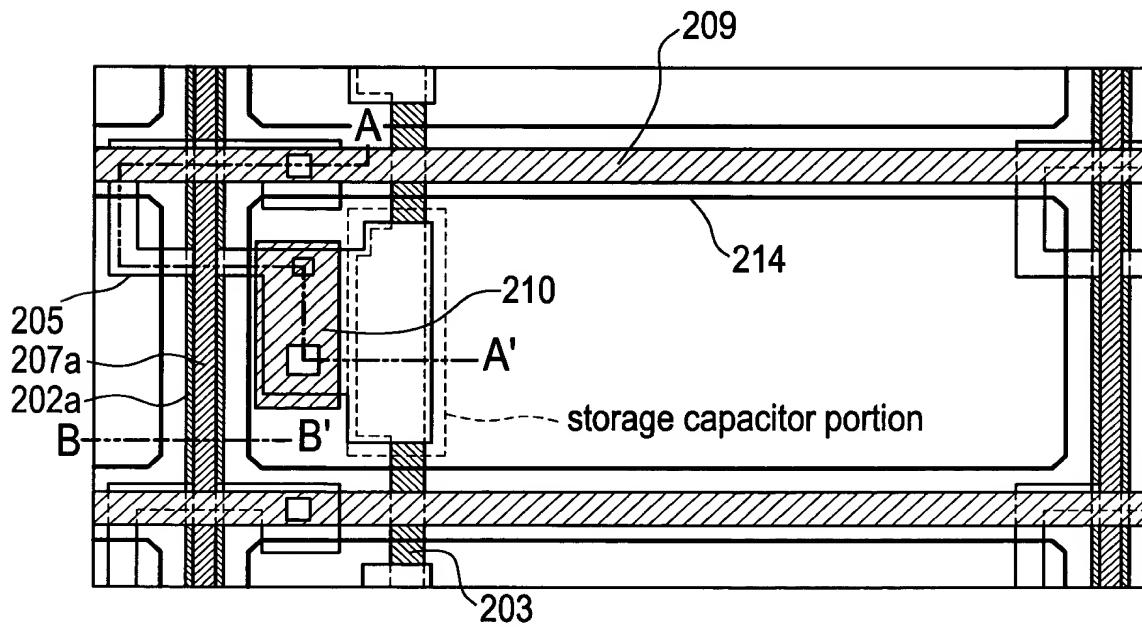
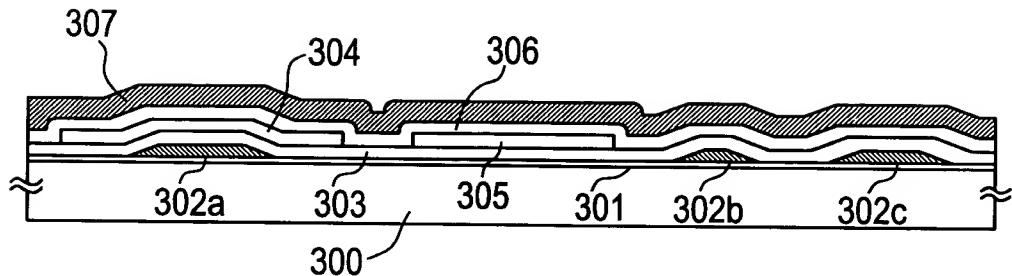
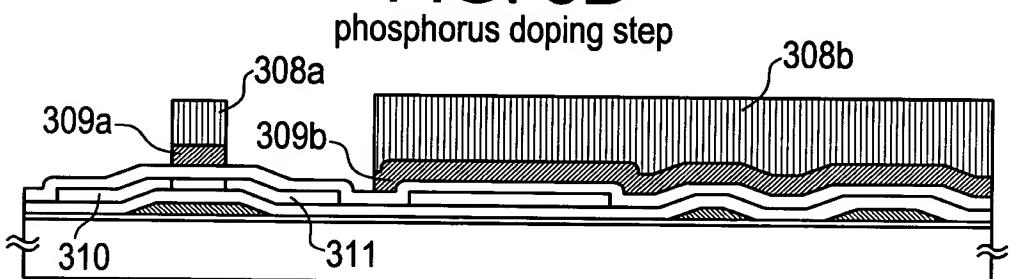
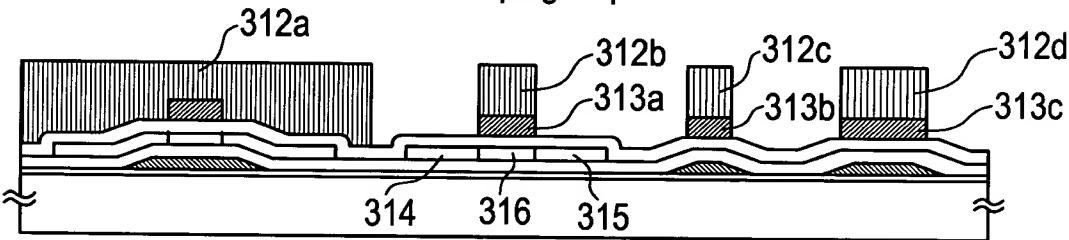
FIG. 2A**FIG. 2B**

FIG. 3A**FIG. 3B****FIG. 3C**

boron doping step

**FIG. 3D**

back side exposure step phosphorus doping step

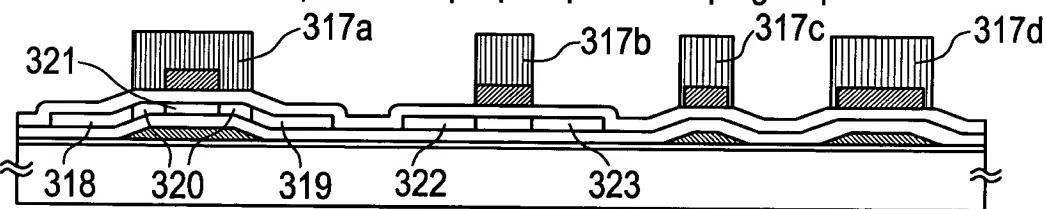
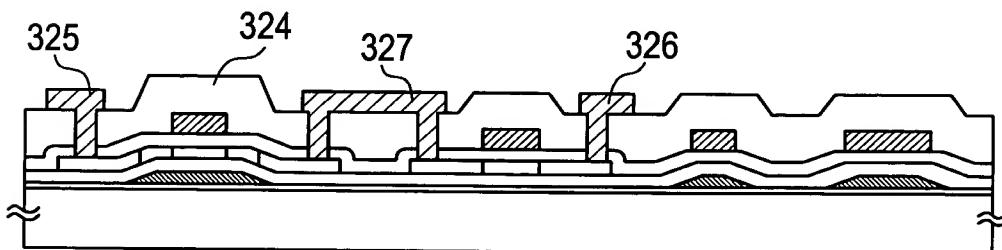
**FIG. 3E**

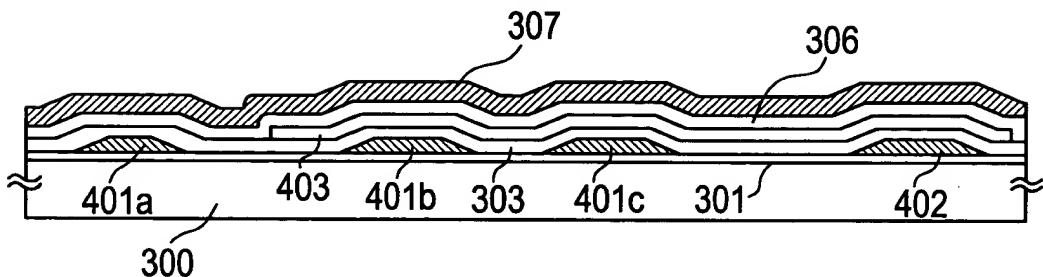
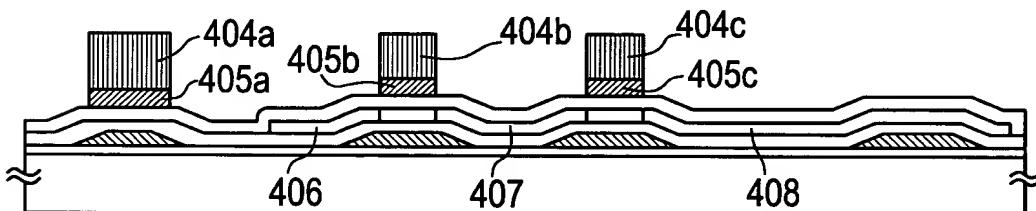
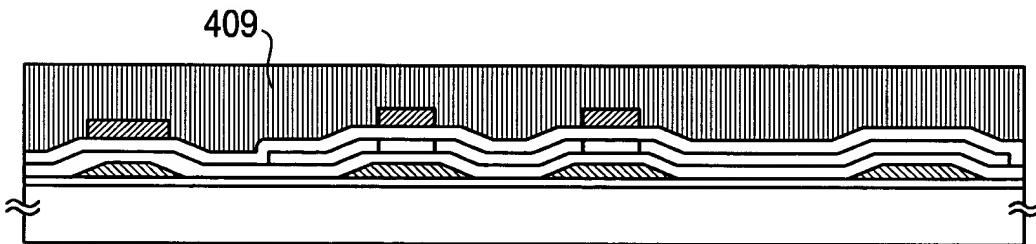
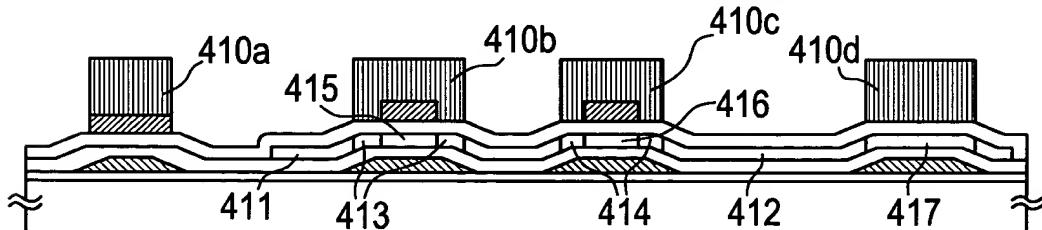
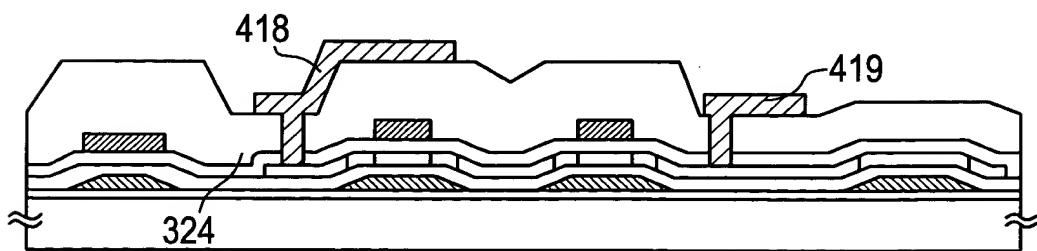
FIG. 4A**FIG. 4B**
phosphorus doping step**FIG. 4C**
boron doping step**FIG. 4D**
back side exposure step phosphorus doping step**FIG. 4E**

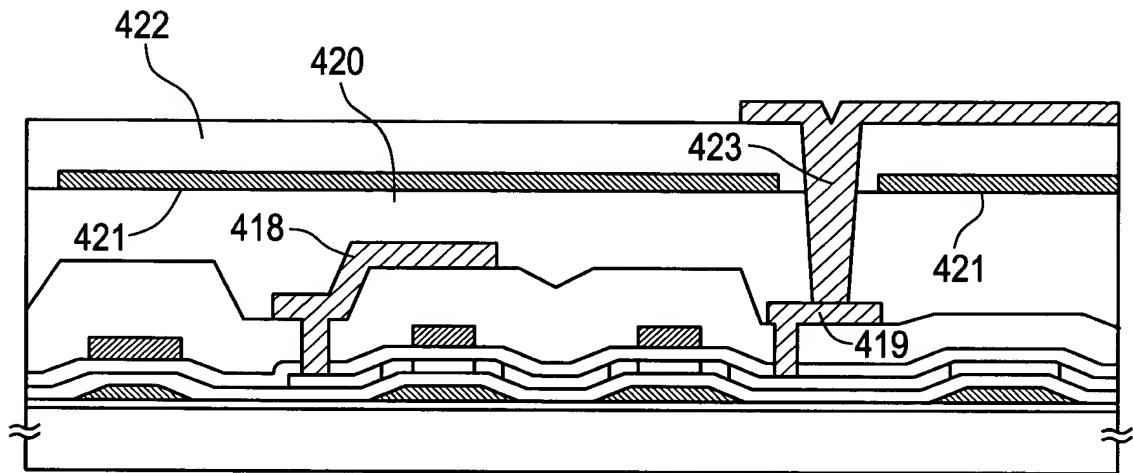
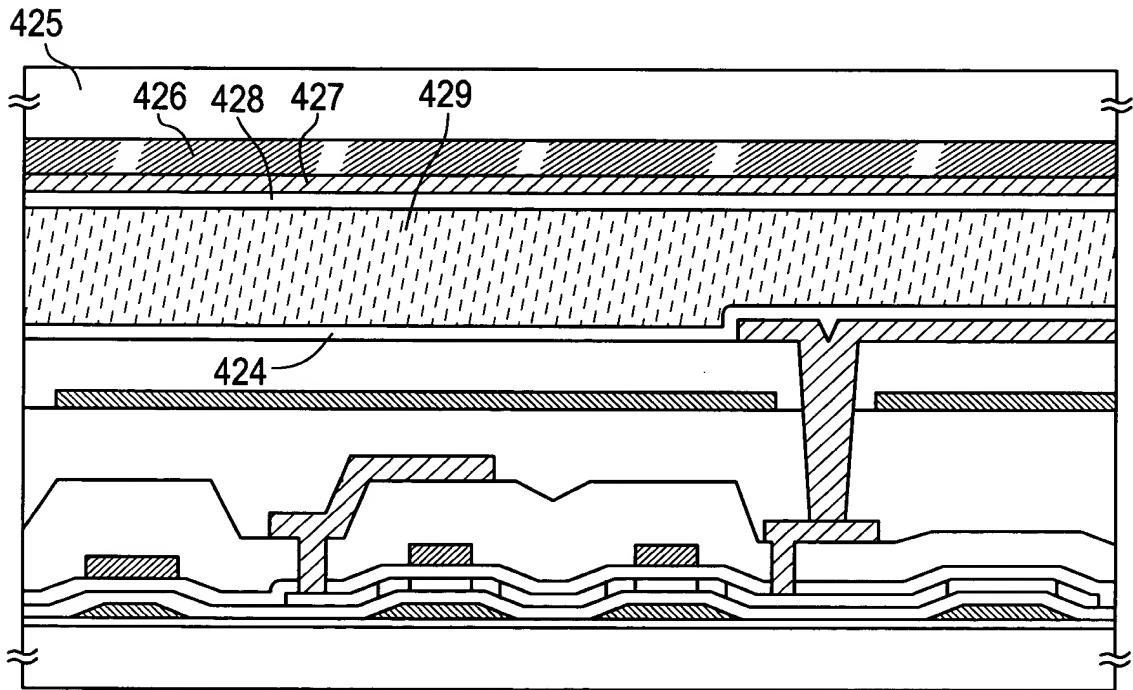
FIG. 5A**FIG. 5B**

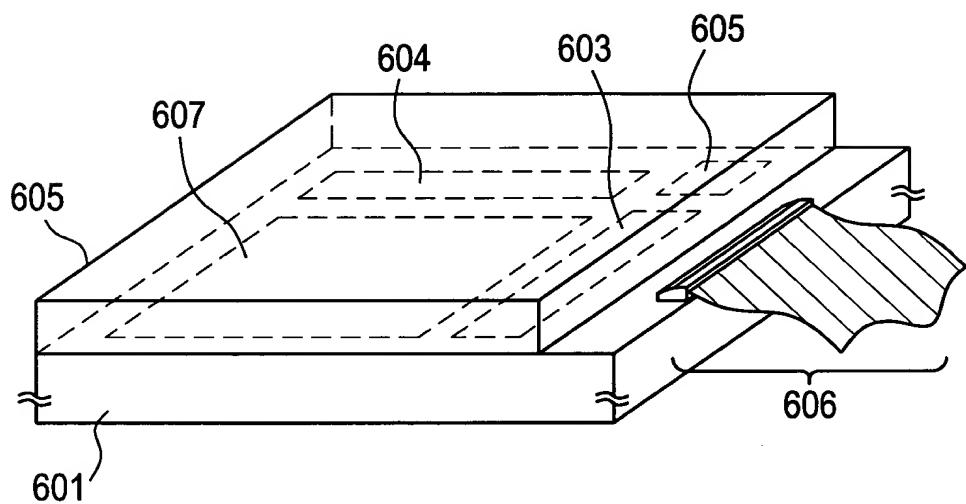
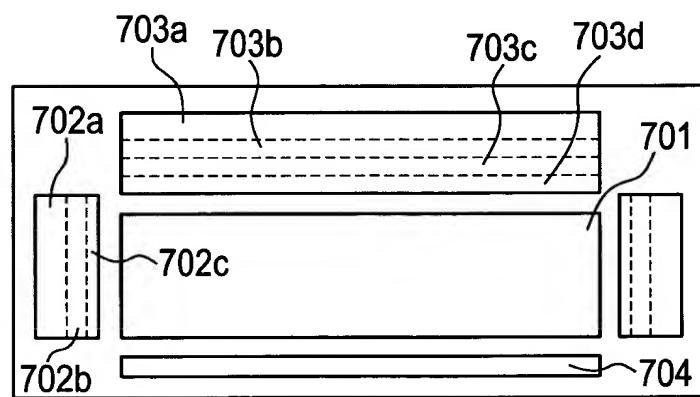
FIG. 6**FIG. 7**

FIG. 8A

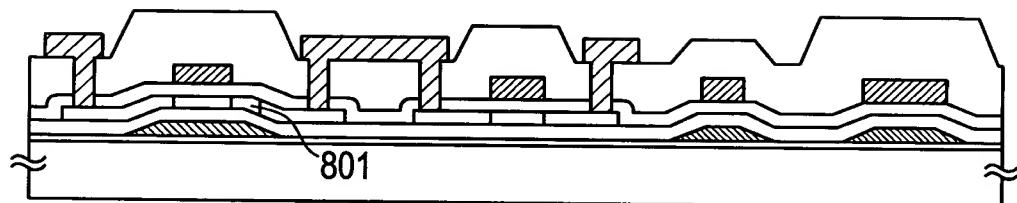


FIG. 8B

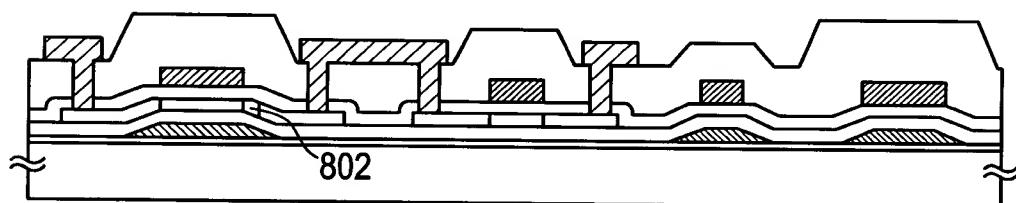


FIG. 8C

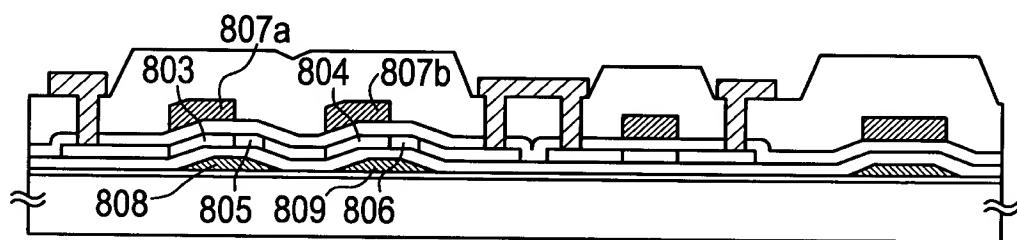


FIG. 8D

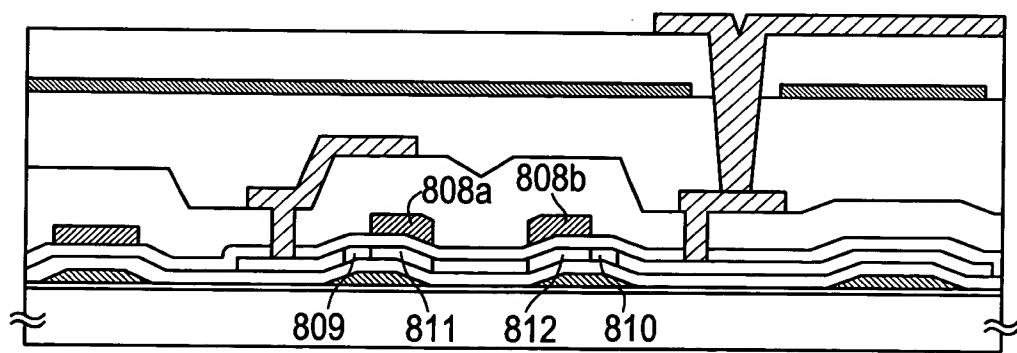


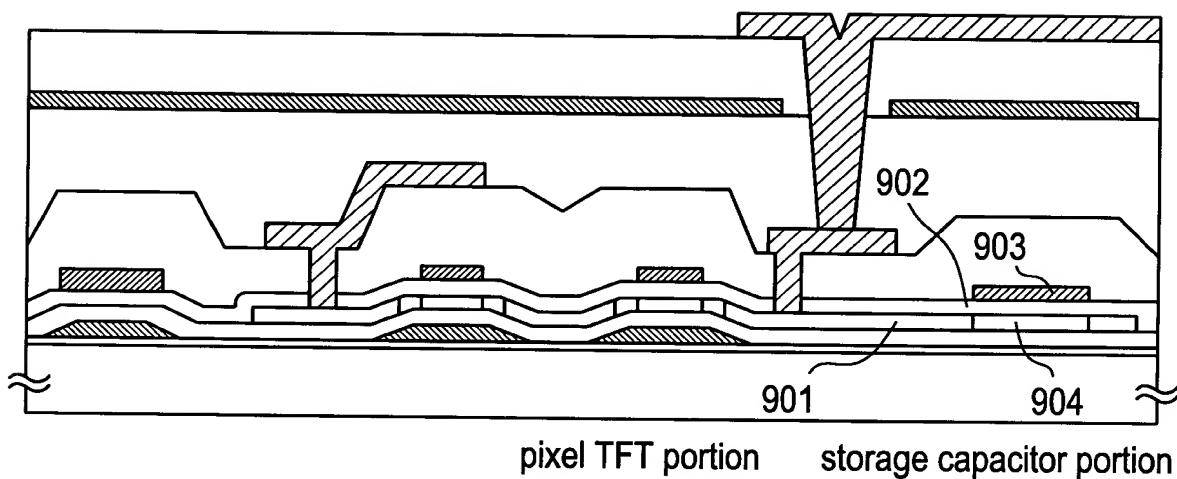
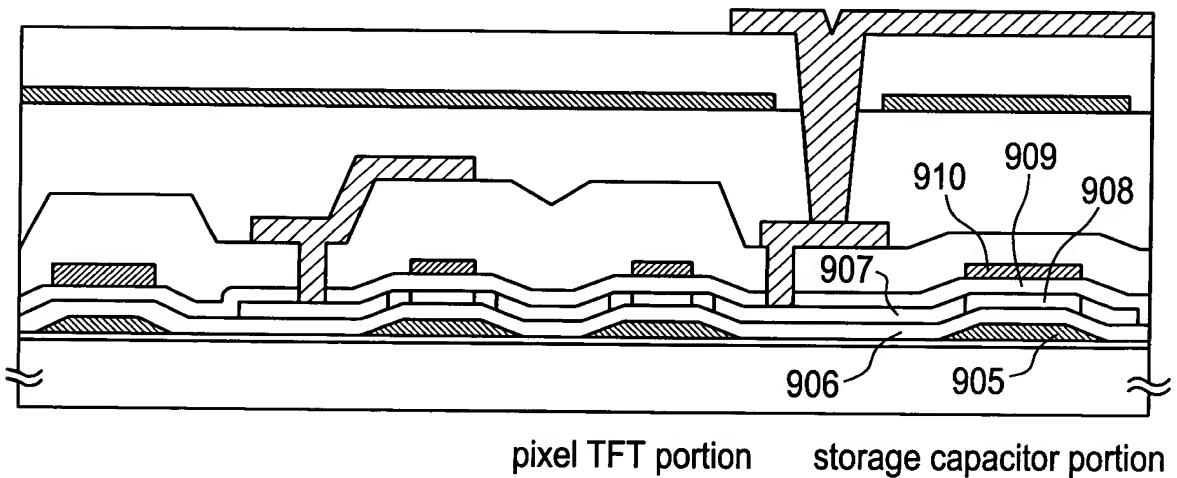
FIG. 9A**FIG. 9B**

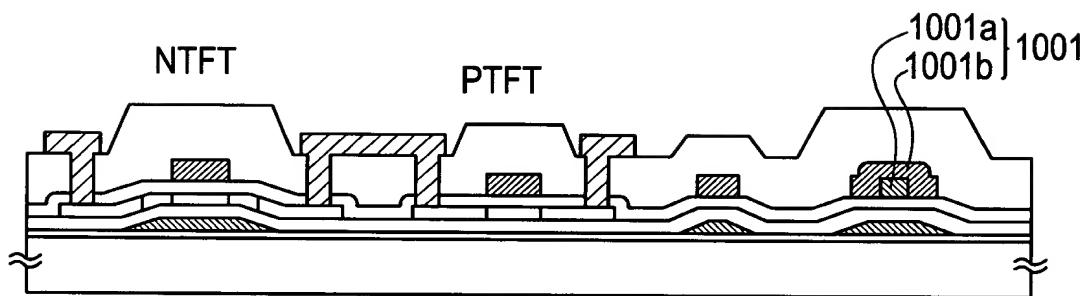
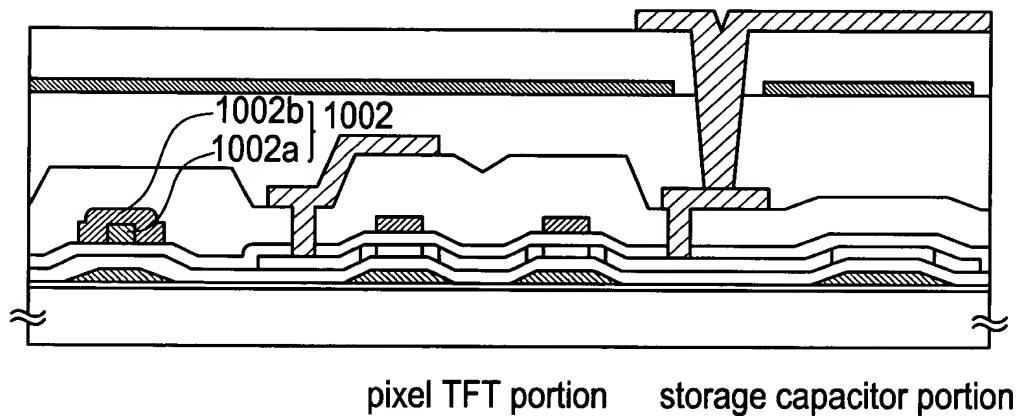
FIG. 10A**FIG. 10B**

FIG. 11A

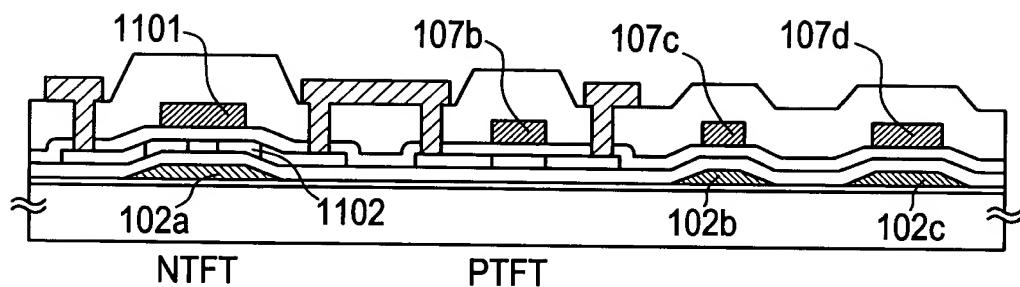


FIG. 11B

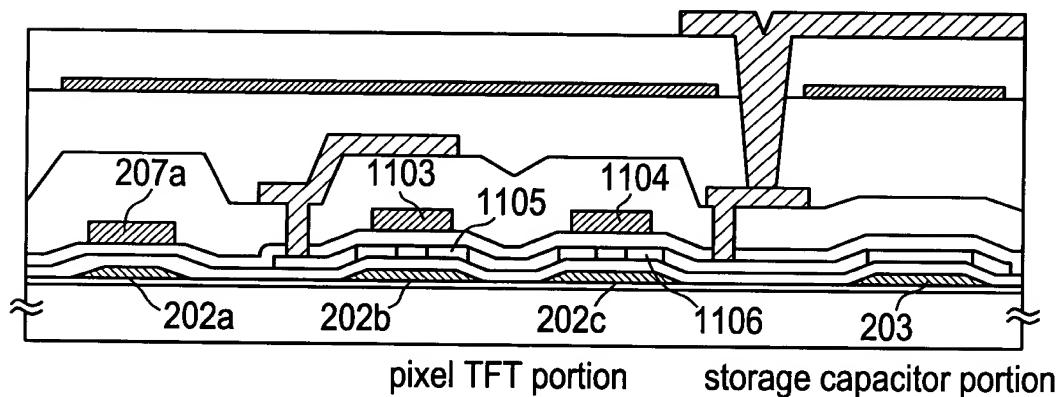


FIG. 12
gettering step by phosphorus

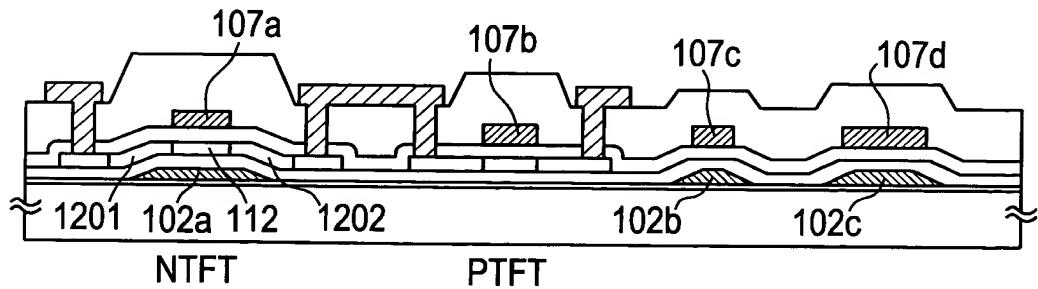


FIG. 13A

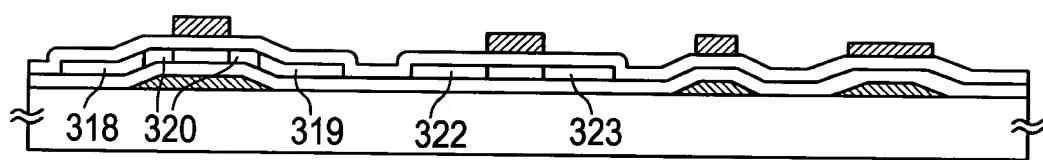


FIG. 13B

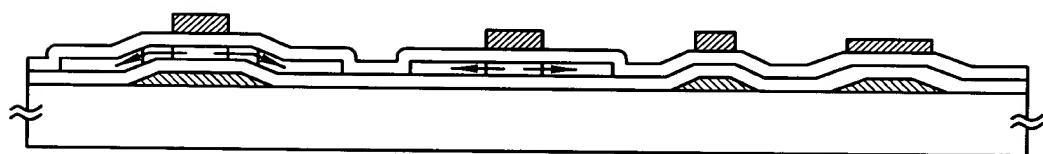


FIG. 14A

Phosphorus doping step (n^-)

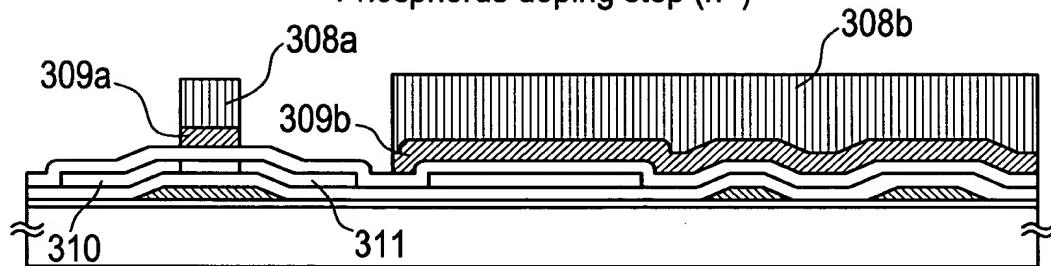


FIG. 14B

Backside exposure step, phosphorus doping step (n^-)

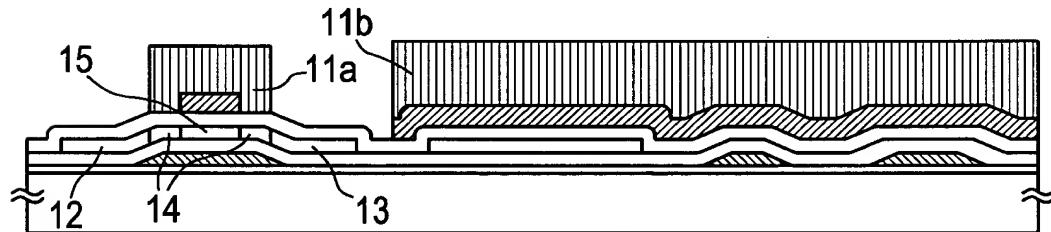
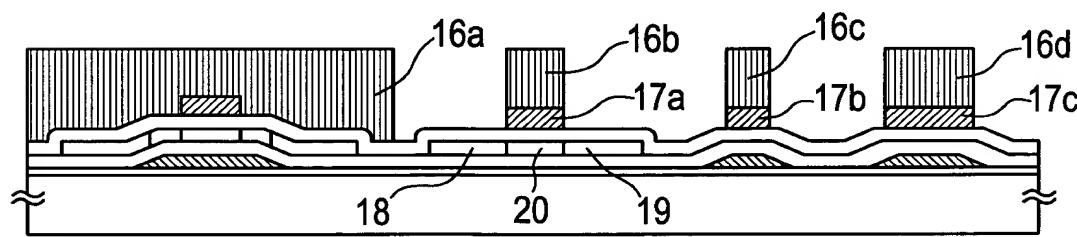


FIG. 14C

Boron doping step (p^{++})



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FIG. 15A
Boron doping step (p^{++})

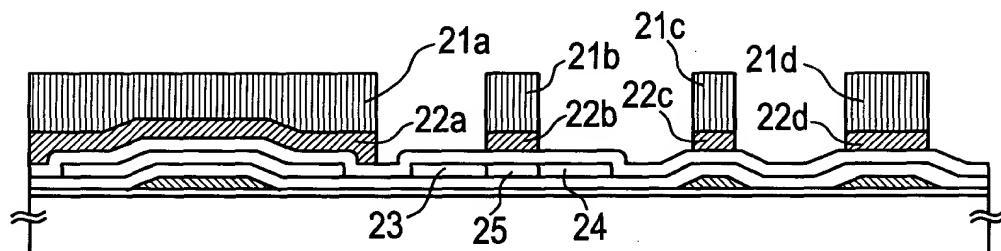


FIG. 15B
Phosphorus doping step (n^-)

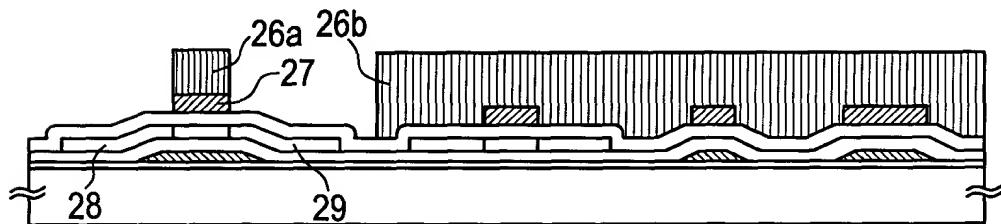


FIG. 15C
Backside exposure step, phosphorus doping step (n^+)

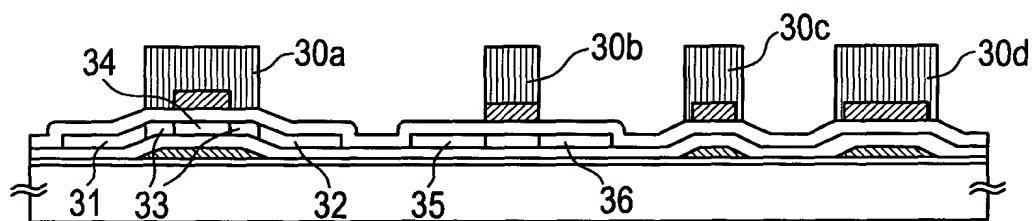


FIG. 16A
Boron doping step (p^{++})

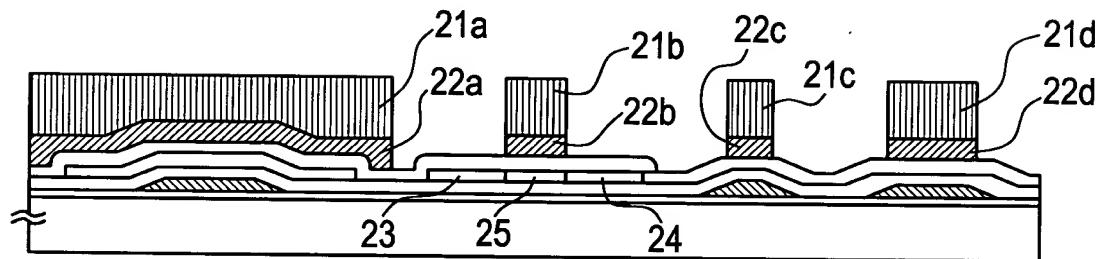


FIG. 16B
Phosphorus doping step (n^{++})

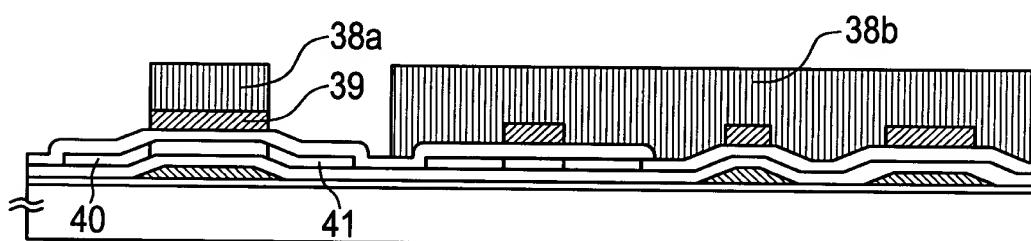


FIG. 16C
Phosphorus doping step (n^-)

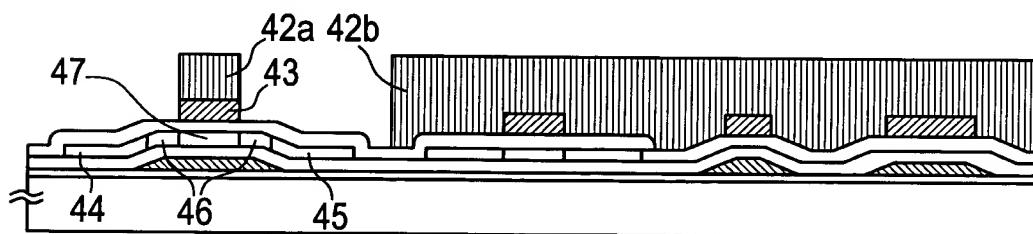


FIG. 17A
Phosphorus doping step (n^+)

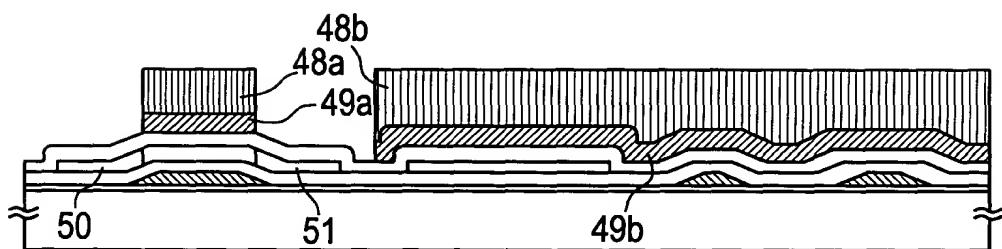


FIG. 17B
Phosphorus doping step (n^-)

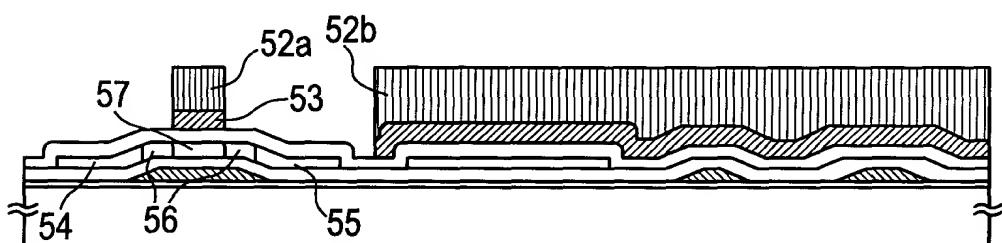


FIG. 17C
Boron doping step (n^{++})

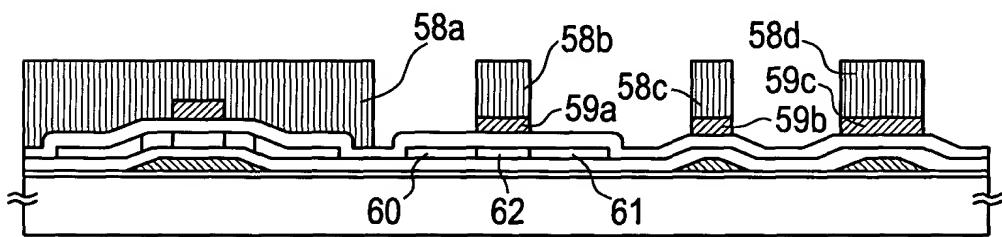


FIG. 18A
Phosphorus doping step (n^+)

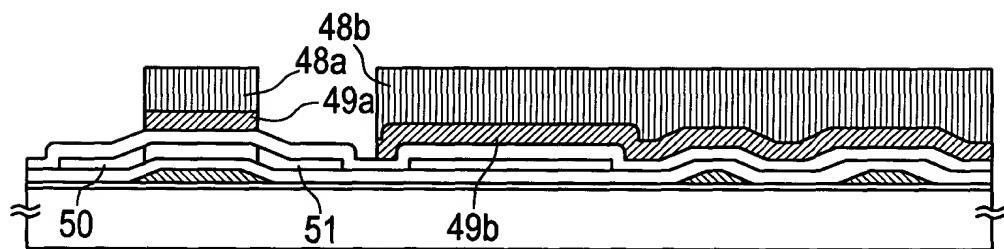


FIG. 18B
Boron doping step (p^{++})

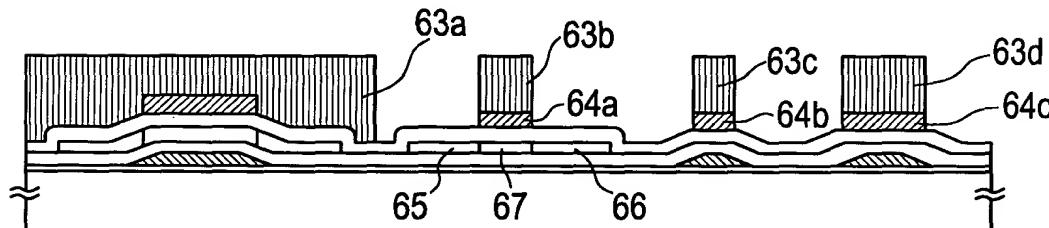


FIG. 18C
Phosphorus doping step (n^-)

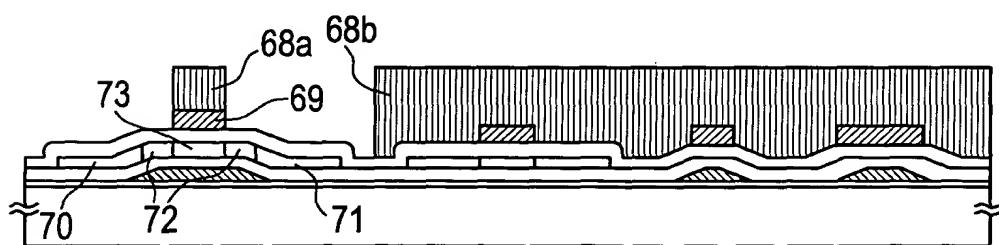


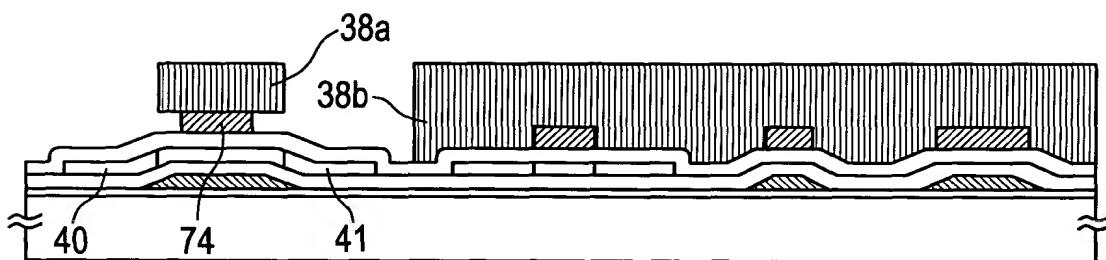
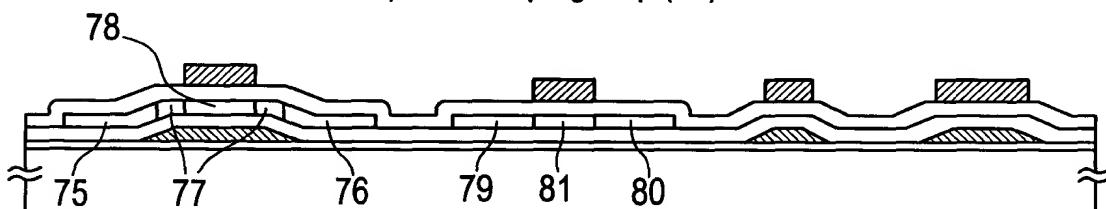
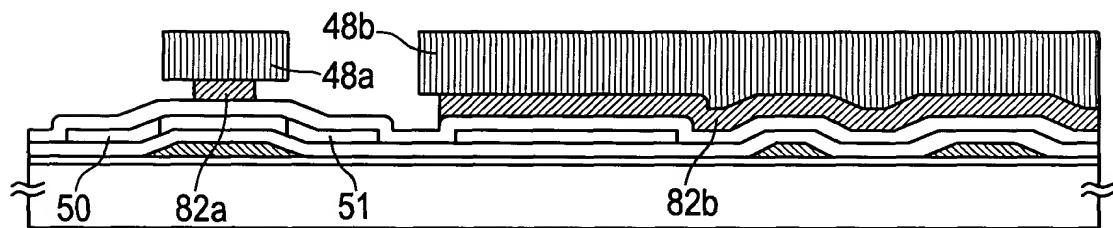
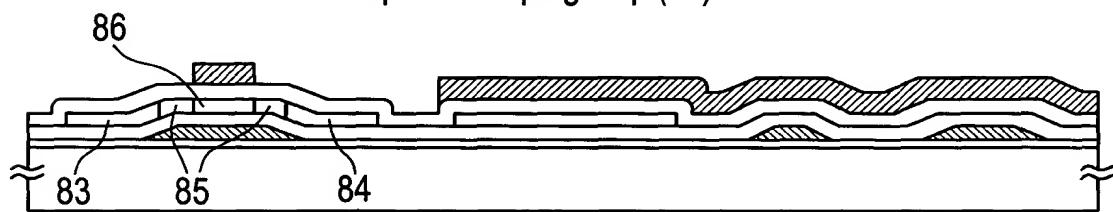
FIG. 19A**FIG. 19B**
Phosphorus doping step (n^-)**FIG. 20A****FIG. 20B**
Phosphorus doping step (n^-)

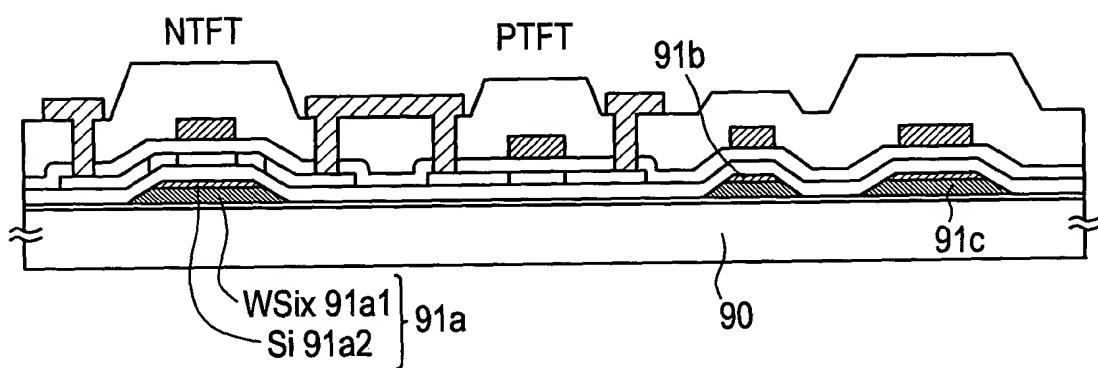
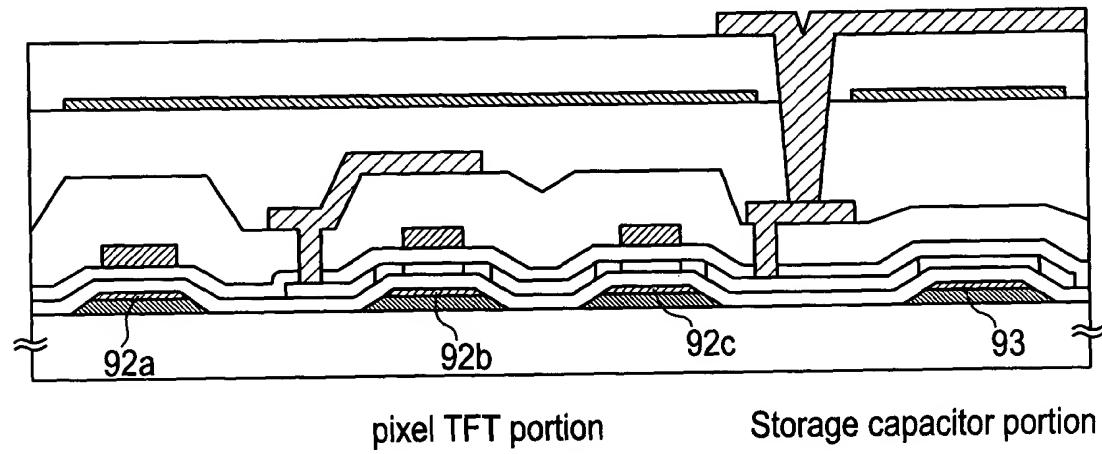
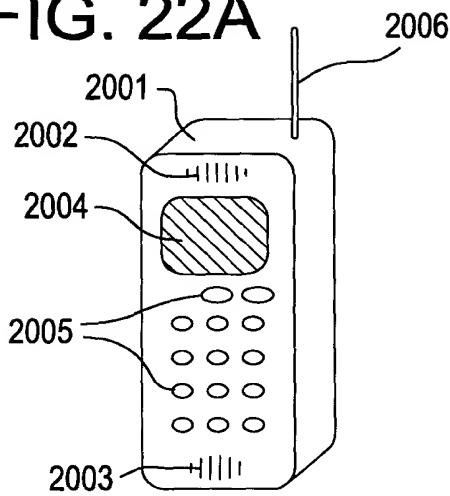
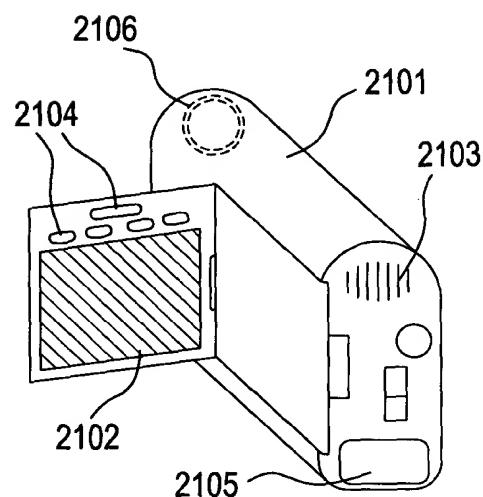
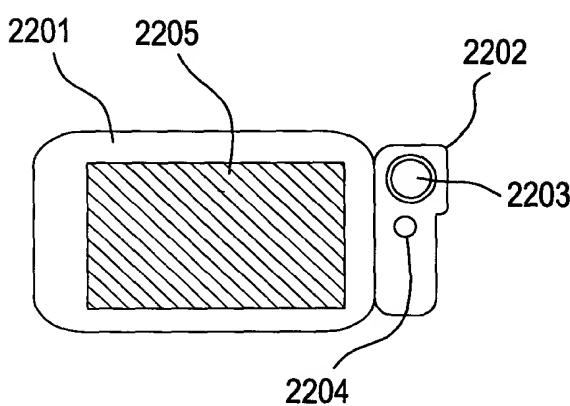
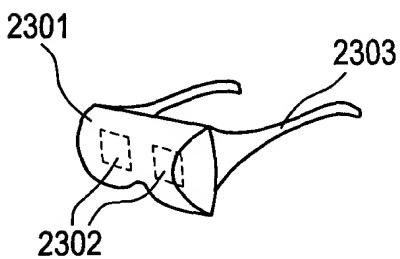
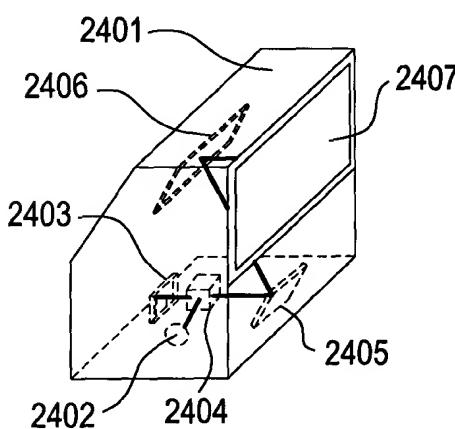
FIG. 21A**FIG. 21B**

FIG. 22A**FIG. 22B****FIG. 22C****FIG. 22D****FIG. 22E****FIG. 22F**